

## **REMARKS**

Claims 1-16 are amended. Claims 1-16 remain in the Application. Reconsideration of the pending claims is respectfully requested in view of the above amendments and the following remarks.

### **I. Claims Rejected Under 35 U.S.C. § 112**

Claims 4 and 9 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite. Applicants replace “the modified pseudo-noise code” with “a modified pseudo-noise code” in Claim 4, and replace “the optical FBG filters” with “optical FBG filters” in Claim 9. Accordingly, reconsideration and withdrawal of the § 112 rejection are respectfully requested.

### **II. Claims Rejected Under 35 U.S.C. § 102**

A. Claims 1, 4, 11 and 12 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2004/0018018 issued to Izadpanah (“Izadpanah”).

To anticipate a claim, the Examiner must show that a single reference teaches each of the elements of that claim. Claim 1, as amended, include the elements of “an optical circulator in the optical CDMA encoding means for transmitting the encoded light into the optical modulation means, the optical circulator being optically coupled to at least one filter.” Applicants submit that Izadpanah does not teach at least these elements.

The Examiner cited Izadpanah for disclosing the optical CDMA encoding means and the modulating means. However, Izadpanah does not disclose “an optical circulator in the optical CDMA encoding means for transmitting the encoded light into the optical modulation means, the optical circulator being optically coupled to at least one filter” as recited in amended Claim 1. Izadpanah does not mention any optical circulator optically coupled to at least one filter in the entire disclosure. Thus, Izadpanah does not teach each of the elements of amended Claim 1.

Claim 4 depends from Claim 1 and incorporates the limitations thereof. Thus, for at least the reasons mentioned above in regard to Claim 1, Izadpanah does not teach each of the elements of Claim 4. Accordingly, reconsideration and withdrawal of the § 102 rejection of Claims 1 and 4 are requested.

In regard to independent Claim 11, Claim 11 as amended includes the elements of “wherein the encoding the light into the code or the complement code is performed according to a modified pseudo-noise code that has equal number of ones and zeros.” There is nothing in Izadpanah that discloses a modified pseudo-noise code that has equal number of ones and zeros. Rather, Izadpanah discloses encoding the light according to a user code (Fig. 1a). A user code represents a unique permutation scheme for each user (Paragraph 30). Thus, the user code is not a modified pseudo-noise code having equal number of ones and zeros. For the foregoing reasons, Izadpanah does not teach each of the elements of amended Claim 11.

Claim 12 depends from Claim 11 and incorporates the limitations thereof. Thus, for at least the reasons mentioned above in regard to Claim 11, Izadpanah does not teach each of the elements of Claim 12. Accordingly, reconsideration and withdrawal of the § 102 rejection of Claims 11 and 12 are requested.

B. Claims 5, 8, 11 and 15 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Lam et al., “Experimental demonstration of bipolar optical CDMA system using a balanced transmitter and complementary spectral encoding”, Photonics Technology Letters, IEEE, Volume 10, Issue 10, October 1998, pages 1504-1506 (“Lam”).

Independent Claim 5, as amended, includes the elements of “an optical circulator in the optical CDMA encoding means for transmitting the encoded light into the optical modulation means, the optical circulator being optically coupled to filters.” Lam is relied on for disclosing the optical CDMA encoding means and the modulating means. However, Lam does not disclose “an optical circulator in the optical CDMA encoding means for transmitting the encoded light into the optical modulation means, the optical circulator being optically coupled to filters” as recited in amended Claim 5. Lam does not mention any optical circulator optically coupled to filters. Thus, Lam does not teach each of the elements of amended Claim 5.

Analogous discussions apply to independent Claim 8, which is amended to include an optical circulator optically coupled to filters. Thus, for at least the reasons mentioned above in regard to Claim 5, Lam does not teach each of the elements of amended Claim 8.

In regard to independent Claim 11, Claim 11 as amended includes the elements of “wherein the encoding the light into the code or the complement code is performed according to a modified pseudo-noise code that has equal number of ones and zeros.” Lam does not disclose

any modified pseudo-noise code that has equal number of ones and zeros. Thus, Lam does not teach each of the elements of amended Claim 11.

Analogous discussions apply to independent Claim 15, which is amended to include a modified pseudo-noise code that has equal number of ones and zeros. Thus, for at least the reasons mentioned above in regard to Claim 11, Lam does not teach each of the elements of amended Claim 15.

Accordingly, reconsideration and withdrawal of the § 102 rejection of Claims 5, 8, 11, and 15 are requested.

C. Claim 13 is rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,236,483 issued to Dutt et al. ("Dutt").

Independent Claim 13, as amended, includes the elements of "wherein the encoding the light into the code or the complement code is performed according to a modified pseudo-noise code that has equal number of ones and zeros." Dutt discloses encoding and transmitting bipolar data. However, Dutt does not teach a modified pseudo-noise code that has equal number of ones and zeros. Thus, Dutt does not teach each of the elements of amended Claim 13.

Accordingly, reconsideration and withdrawal of the § 102 rejection of Claim 13 are respectfully requested.

### **III. Claims Rejected Under 35 U.S.C. § 103(a)**

A. Claims 7, 10, 12 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lam in view of Kartalopoulos, "Introduction to DWDM Technology", IEEE Press, 2000, pages 1422-144 ("Kartalopoulos"), and in further view of U.S. Patent Application Publication No. 2004/0208233 issued to Dafesh ("Dafesh").

To establish a *prima facie* case of obviousness, the relied upon references must teach or suggest every limitation of the claim such that the invention as a whole would have been obvious at the time the invention was made to one skilled in the art.

Claims 7, 10, 12, and 16 depend from Claims 5, 8, 11, and 15, respectively, and incorporate the limitations thereof. Thus, for at least the reasons mentioned above in regard to Claims 5, 8, 11, and 15, Lam does not teach or suggest these dependent claims.

Kartalopoulos and Dafesh do not cure the defects of Lam. Kartalopoulos discloses a reflective MEMS switch and Dafesh discloses a pseudorandom spreading codes. However, neither Kartalopoulos nor Dafesh teaches or suggests encoding according to a modified pseudo-noise code that has equal number of ones and zeros. Thus, the cited references do not teach or suggest each of the elements of Claims 5, 8, 11, and 15, as well as their dependent claims, namely, Claims 7, 10, 12, and 16. Accordingly, reconsideration and withdrawal of the § 103 rejection of Claims 7, 10, 12, and 16 are requested.

B. Claim 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Dutt in view of Dafesh.

Claim 14 depends from Claim 13 and incorporate the limitations thereof. Thus, for at least the reasons mentioned above in regard to Claim 13, Dutt does not teach or suggest each of the elements of Claim 14.

Dafesh does not cure the defects of Dutt. Dafesh discloses a pseudorandom spreading code. However, Dafesh does not teach or suggest encoding according to a modified pseudo-noise code that has equal number of ones and zeros. Thus, the cited references do not teach or suggest each of the elements of Claim 14, as well as its dependent claim, namely, Claim 13. Accordingly, reconsideration and withdrawal of the § 103 rejection of Claim 13 are requested.

#### **IV. Allowable Subject Matter**

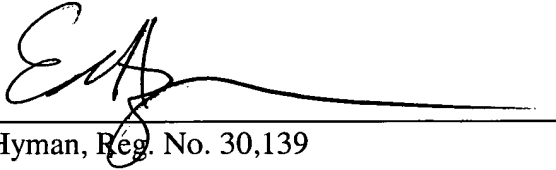
Applicants appreciate the Examiner's indication that Claims 2, 3, 6 and 9 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims. Applicants respectfully submit that the above amendment to base Claims 1, 5, and 8 has placed these dependent claims in condition for allowance. Accordingly, reconsideration and withdrawal of the objection to Claims 2, 3, 6 and 9 are requested.

**CONCLUSION**

In view of the foregoing, it is believed that all claims are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP



Dated: December 5, 2006

Eric S. Hyman, Reg. No. 30,139

12400 Wilshire Blvd.  
Seventh Floor  
Los Angeles, California 90025  
(310) 207-3800

**CERTIFICATE OF MAILING:**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

 12/6/06  
Amber D. Saunders Date